Restoring the Face of the Fight: Interdisciplinary Innovation at the DHA Center of Excellence for Maxillofacial Restoration

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November 5, 2026
1330 – 1430 ET

Presenter

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- LCDR Stephen Moreno, is a distinguished military officer and board-certified oral and maxillofacial surgeon currently serving as a dual-hatted leader at the Navy Medicine Readiness and Training Command San Diego (NMRTCSD).
- As the Site Director for the Defense Health Agency's Center of Excellence in Maxillofacial Restoration, LCDR Moreno oversees cutting-edge reconstructive care for service members and veterans. Concurrently, he serves as the Program Director for the Oral and Maxillofacial Surgery Residency at NMCSD, where he directs the academic, clinical, and surgical training of the Navy's next generation of maxillofacial surgeons.

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Learning Objectives

1. **Describe** the burden of maxillofacial injury and why a DHA Center of Excellence (CoE) was created.
2. **Explain** how nine integrated care pathways differ from staged reconstruction.
3. **Identify** the tangible and intangible innovations driving outcomes.
4. **Recognize** which patients to refer and how to engage the CoE.

WHY IT EXISTS

The Face Is a Readiness Problem

30%

of OIF/OEF combat wounds were head and neck

(Owens et al., 2008)

30–40%

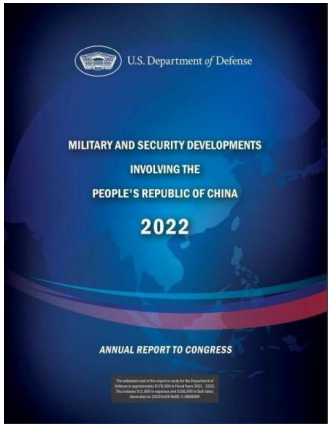
of casualties in recent conflicts involve the face and jaws

(Kowitz, 2026)

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civilian centers offer an equivalent capability

Defense Health Agency, 2026



(Office of the Secretary of Defense, 2022)

We cannot lose these lessons again.

What These Injuries Take Away

- Speech
- Swallowing
- Breathing
- Teeth & chewing
- Facial identity
- Sensation
- Social connection
- Return to duty



Restoring these takes a team, not a single operation.

The Gap: Staged Care vs. Integrated Care

Conventional

- Teeth come years later, if ever
- Specialists work in sequence
- Patients burn out
- Few outcomes data

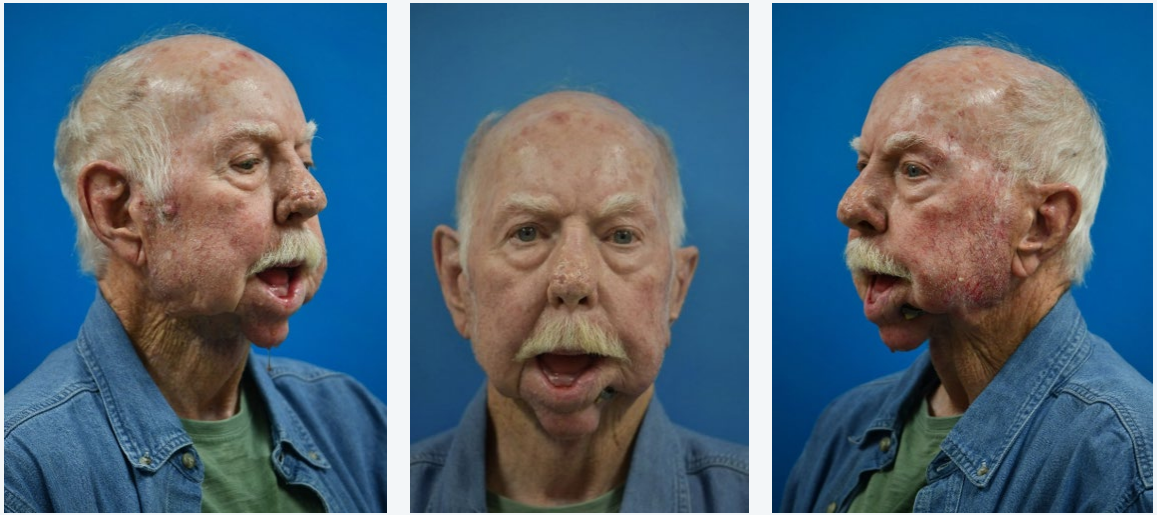
CoE pathway

- Bone and teeth planned together
- Nine pathways run in parallel
- One team, one timeline
- Outcomes tracked from day one

WHAT THE GAP LOOKS LIKE

Left With No Option

Treated at a civilian institution and left like this. Then he found us.



NMCSD Maxillofacial Restoration CoE patient. Images used with written patient consent.

What he was left with

- Open lip posture and drooling
- Lower facial asymmetry
- No reconstructive plan offered

This is the patient a staged, siloed system leaves behind.

From Local Platform to Enterprise Center

2020
Platform launched, no new funding

2020–22
Proof of concept; first DoD Jaw in a Day

2022
FY23 (National Defense Authorization Act) NDAA §713 enacted

2026
NMCSD and BAMC designated

Next
Enterprise scale

631

SEC. 713. CENTERS OF EXCELLENCE FOR SPECIALTY CARE IN MILITARY HEALTH SYSTEM.

(a) CENTERS OF EXCELLENCE.—Section 1073d(b)(4) of title 10, United States Code, is amended to read as follows:

"(4)(A) The Secretary shall designate certain major medical centers as regional centers of excellence for the provision of specialty care services in the areas of specialty care described in subparagraph (D). A major medical center may be designated as a center of excellence under this subparagraph for more than one such area of specialty care.

(FY2023 NDAA, Sec. 713)

One CoE, two regional hubs: NMCSD and Brooke Army Medical Center (BAMC)

(James M. Inhofe NDAA for FY2023, 2022); (Kowitz, 2026); (Newman, 2026).

Mission and Scope of Care

Mission

Restore form, function, and identity after congenital, pathologic, or traumatic conditions of the face, mouth, and jaws.

Who we treat

- Benign tumors
- Head and neck cancer
- Congenital anomalies
- Acute facial trauma
- Delayed (secondary) trauma
- Prior free flap, no teeth

One Team, Nine Pathways

- Pre-operative telehealth
- Head & neck cancer care
- Pain management
- Nursing-led ERAS
- Speech & swallow
- Rapid dental restoration
- Mental health
- Physical rehab
- Research & training

125+

specialists

One shared timeline

(Kowitz, 2026); (Dort et al., 2017)

TANGIBLE INNOVATION: DIGITAL WORKFLOW

Design the Result Before the First Incision

Acquire
CT and scans

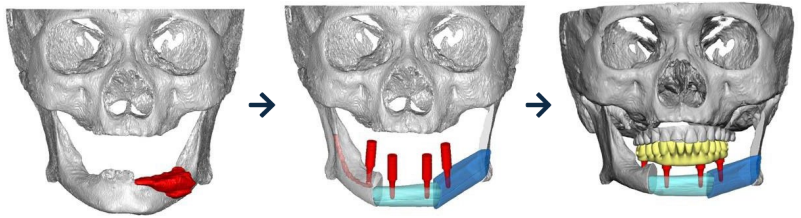
Plan
Virtual surgery

Design
Teeth first

Make
Print and mill in house

Operate
Guided surgery

Restore
Teeth same day



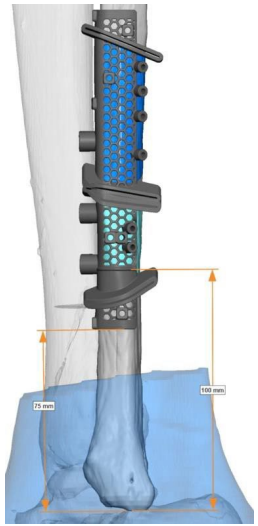
Deidentified NMCSD virtual surgical plan

Workflow adopted commercially by two of the largest maxillofacial plating companies

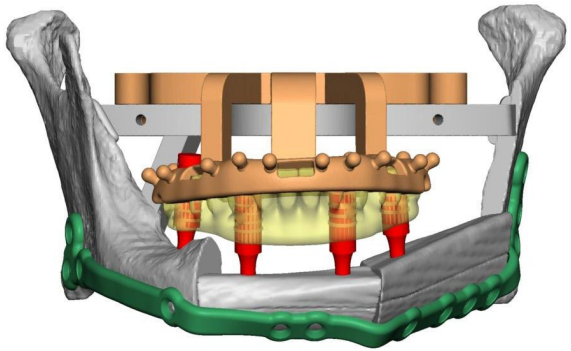
TANGIBLE INNOVATION

Jaw in a Day

Resection, fibula flap, implants, and fixed teeth in one operation



Fibula guide with implant sleeves



Teeth, implants, and fibula positioned in one plan

Deidentified NMCSD virtual surgical plan

35+ cases at NMCSD

Kowitz, 2026

97% implant integration at 3 months

Williams, et al., 2021

100% integration in irradiated fibulas

Williams, et al., 2021

(Levine et al. 2013); (Williams et al. 2021).

Ameloblastoma at 26: Planning the Teeth First

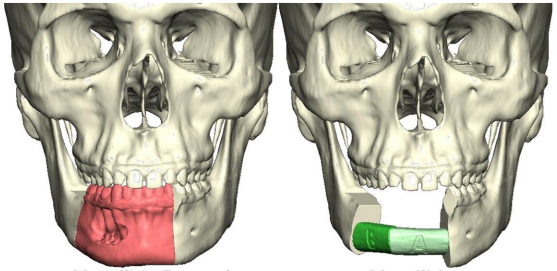
Resection, reconstruction, and fixed teeth in one virtually planned operation.

The patient

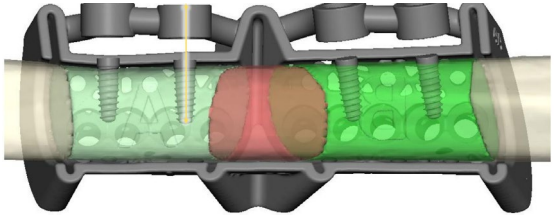
- 26-year-old man, recurrent right jaw pain
- Cone beam computed tomography (CBCT): expansile lesion at #27–29, buccal plate resorbed
- Biopsy: conventional multicystic ameloblastoma

One operation

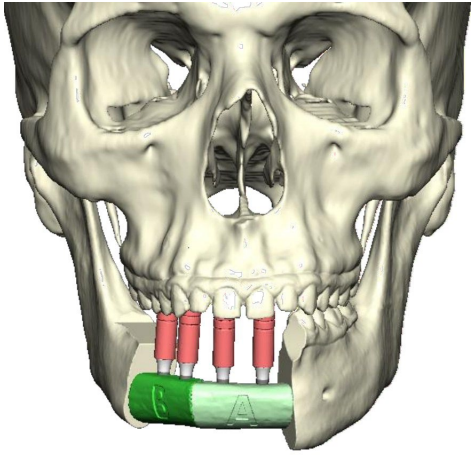
- Right segmental mandibulectomy
- Two-segment fibula free flap
- Four immediate dental implants
- Inferior alveolar nerve reconstruction
- Fixed prosthesis delivered



Resection (red) and two-segment fibula



Fibula guide places implants before transfer



Implants positioned from the teeth down

The Result: Fixed Teeth on a Fibula

Tumor out, jaw rebuilt, and teeth restored without a staged wait.



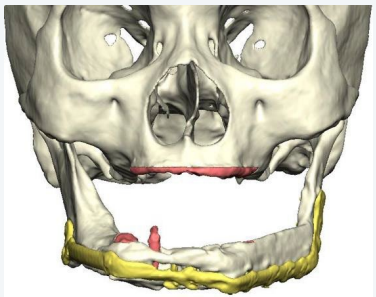
Postoperative photographs: screw-retained prosthesis on four fibula implants. Used with written patient consent.

TANGIBLE INNOVATION

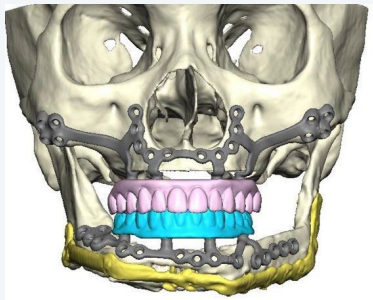
The First and Only Military Health System (MHS)/DHA Pre-Prosthetic Placed onto a Fibula Free Flap

An option beyond "when implants don't work."

Turning this...



Edentulous fibula



Virtual plan

Designed entirely in Virtual Surgical Planning (VSP)

Into this



Fixed teeth on the day of surgery

NMCSD Maxillofacial Restoration CoE case. Used with patient consent.

TANGIBLE INNOVATION

Same Patient, Before and After

From no teeth to a fixed smile on his fibula free flap.

Before



Edentulous fibula, no teeth

After



Fixed teeth, designed entirely in VSP

NMCSD Maxillofacial Restoration CoE case. Used with patient consent.

Outcomes: Months, Not Years

70+

patients since 2020

94%

back to full duty in 16 weeks

<7

days in hospital vs. 12–13 nationally

Time to functional teeth



(Kowitz, 2025, 2026); (Defense Health Agency, 2026). ~4-month timeline from internal program data. Bars illustrative.

Building the Evidence: An Outcomes Registry

No registry has ever tracked these patients from injury through the VA.

NMCSD · BAMC · Philadelphia Veteran Affairs (VA), with Joint trauma System (JTS) and Uniformed Services University (USU)

A joint VA/DoW initiative

Goal: the first maxillofacial restoration Patient-Reported Outcome Measures (PROMs) and evidence for practice guidelines

What we measure

- Flap and implant success
- Time to teeth
- Time to oral diet
- Opioid use
- Length of stay
- Return to duty and quality of life

Scaling Knowledge Across the Enterprise

Virtual consultation

Expert review before the patient travels

Monthly case conference

Since Feb 2025, open to DoW clinicians

Training & currency

Graduate Medical Education (GME), nursing, corpsmen;
University California San Diego Health partnership

Partnerships

JTS · USU · Murtha Cancer Center · VA

(Kowitz, 2026); (Defense Health Agency, 2026).



DoD Maxillofacial Restoration Conference flyer

WHY IT MATTERS TO THE ENTERPRISE

The Return on Investment



Ready force

- Full duty in weeks
- Fewer limited duty days and boards

Ready medical force

- High-acuity cases sustain skills
- Ready for large-scale combat

Better value

- Complex care recaptured
- Blueprint to export across MHS

How You Can Engage

1 Who

- Complex jaw or face defects
- Prior free flap, no teeth

2 When

- Early, before reconstruction
- Whenever rehab stalls

3 How

- Virtual consult via your Military Treatment facility
- Monthly DoW Maxillofacial Restoration (MFR) Conference

NMCSD sandiego.tricare.mil/Health-Services/Specialty-Care/Maxillofacial-Restoration-Program

BAMC bamc.tricare.mil/Health-Services/Hospital-Care-Surgery/Maxillofacial-Restoration-Center-of-Excellence

REMEMBER

Key Takeaways

- **The face is a readiness problem.** Common, disabling, no civilian equivalent.
- **Integration is the innovation.** Nine pathways, one timeline, 94% back to duty.
- **Technology enables; teams deliver.** Time to teeth goes from years to months.
- **Engage early.** Virtual consult, monthly conference, registry.

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All patient images and cases are deidentified or shown with written patient consent.

"We don't just reconstruct faces, we restore lives."

Questions?

How to Obtain CE/CME Credit

*Only those who support the Military Health System are eligible to claim CE/CME credits

Clinical Communities Speaker Series: Healthcare Innovations: Catalyzing the Future of Patient Care Delivery

Credits are awarded by session. To claim CE/CME credit for the session(s) you attended, complete each evaluation survey and pass the posttest with 100% accuracy before the evaluation period ends on **November 19, 2026, at 11:59 PM Eastern Time**.

1. Visit the registration page at **https://www.dhaj7-cepo.com/content/2026-nov-ccss** . From there, register for the event or log in to your account if already registered.
2. Once logged in and registered, on the event page, select “Get Started” (located in the menu below the event title on desktop and at the bottom of the page on mobile devices). Note: This tab will not appear unless you are registered and logged in to your account.
3. Under the “Get Started” tab, scroll down to a session you attended and select “Claim credit.”
4. Proceed to take the evaluation and posttest to obtain your certificate after the session has ended.

Once you have been awarded credit, you can download your certificate anytime through your account. Any activity you register for but have yet to complete will be available under your pending activities until the evaluation period ends.

Questions?
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